



## STATEMENT OF BASIS

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BAQ Engineering Services Division

<b>Company Name:</b>	General Conditional Major Operating Permit	<b>Permit Writer:</b>	Mareesa Singleton/Lance Davis
<b>Permit Number:</b>	Asphalt Plants	<b>Date:</b>	DRAFT

### **CRITERIA**

A facility comprised of asphalt production equipment and the following emission sources: Systems for receiving, crushing, screening, handling, storing, weighing, drying, and transferring aggregate (virgin and non-virgin); systems for receiving, storing, and transferring asphalt cement; systems for mixing aggregate with asphalt cement; systems for the storing and dispensing of asphalt; asphalt cement and fuel storage tanks, Auxiliary heaters (including hot oil heaters); and associated emission control system or other sources as approved by the Department may operate under the conditions contained herein if it meets all applicable criteria and contains no other significant sources of air emissions. The owner/operator is responsible for compliance with any emissions sources covered under this permit including third party processing.

Facilities operating under this general conditional major operating permit must meet all of the following criteria:

1. The facility is limited to hot mix asphaltic concrete production or other SCDOT approved methods as allowed in the permit. Use of any other materials will require Department approval.
2. The maximum size for a single auxiliary heater (including hot oil heaters) is limited to less than 10 million BTU/hr rated input capacity.
3. All fuel fired sources at the facility are limited to using natural gas, propane, liquefied petroleum gas, fuel oil and/or recycled oil (with written approval from the Department) as fuel. No other substances are allowed.
4. Operational restrictions and control device operation will limit emissions below major source thresholds for Title V and Prevention of Significant Deterioration (PSD). Specifically, emissions of all criteria pollutants are less than 100.0 tons per year (TPY) and less than 250.0 TPY each, any single hazardous air pollutant (HAP) is less than 10.0 TPY, any combination of HAP's are less than 25.0 TPY.
5. The emissions from all Batch Mix mixers (pug mills) must be ducted to the dust control system and baghouse.

### **CHANGES TO PERMIT SINCE LAST ISSUANCE**

#### **June 2018 Changes:**

1. Cover letter statement has been updated to the current format.
2. Updated Director of the Air Permitting Division title and signature.
3. Included more detail to Condition B.1.C.4 to specify exactly what information (days and hours of crushing operation) is necessary.
4. Added Condition B.4 – Detailed what will be necessary to change or establish a differential pressure range for control devices.
5. Removed “Aggregate Processing” header from Condition C.5.
6. Added “Portable Plant” definition to Condition C.10 to clarify equipment applicability.
7. Changes for Condition C.11.
  - a. Removed “Standards for PM” header from Condition C.11.
  - b. Replaced vague initial performance test requirement with a more descriptive process on determining who is responsible for the initial performance test condition.

#### **December 2016 Changes:**

1. Updated DHEC logo and font to Open Sans.
2. Updated condition B.1 to include emissions from temporary crushing and screening operations.
3. Updated condition B.17 to incorporate the changes to S. C. Regulation 61-62.5, Standard No. 5.2.
4. Added section C for temporary crushing and screening conditions C.1-C.12.
5. Renamed the following sections accordingly.



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6. Updated Condition G.1 to change “no later than” to “within” per updated S.C. Regulation 61-62.1, Section II.

### September 2015 Changes:

1. Updated Std. 1 condition, B.7 (item 2) to add propane due to regulation revision.
2. Updated condition B.15 to be consistent with other permit templates.
3. Added language to condition B.10 to exclude RAP fractioning equipment from applicability portion of Subpart OOO.
4. Updated condition B.17 to clarify sources are not subject to Standard 5.2 until burner replacement.
5. Updated the Regulatory Applicability Review Table in statement of basis as follows:
  - a. 40 CFR 60 – excluded RAP fractioning equipment from applicability portion of Subpart OOO.
  - b. Std. 5.2 – clarification made that new asphalt plants are not subject to tune-up requirements until burner assembly is replaced.
  - c. Std. 5.1 has been removed due to the regulatory change on June 26, 2015 where 5.1 was repealed.

The draft permit was sent to Ms. Ashley Batson with the Asphalt Association on July 21, 2015. She responded back on August 12, 2015 with following comments she received from SCAPA members:

1. Condition B.17 – How will burners currently reaching the NO<sub>x</sub> reduction from Std. 5.2 be documented? Clarification on multiple burners requested. DHEC provide baseline uncontrolled NO<sub>x</sub> emission levels. Has the department done due diligence in confirming replacement burners exist that meet the 30% reduction? Clarify tune-ups requirements will not start until burner is replaced. What documents will be required and would suffice?
2. What is driving the need to keep adding general conditions?

The department met with asphalt association on August 25 to discuss these comments. The department responded back to the comments on August 26, 2015. Condition B.17 was updated for clarification and to address their concerns.

### February 2015 Changes:

1. Template language on Page 1 updated to match other General Conditional Major Permits.
2. Removed Green House Gas limits from conditions A.1 and B.1.
3. Added condition B.6 (general condition for stack tests), renumbered previous conditions (B.6-B.15 are now B.7-B.16).
4. Modified SO<sub>2</sub> limit in condition B.7 from 3.5 lb/million Btu to 2.3 lb/million Btu due to recent regulation revision.
5. Updated modeling condition C.1.
6. Updated conditions D.4, D.5, D.6, G.6, and G.7 to reflect other permit templates.
7. Reformatting to match other GCMs:
  - a. Condition D.7 is now condition F.5.
  - b. Condition G.3 is now F.3.
  - c. Added conditions G.1-G.3, renumbered previous conditions (G.1-G.5 are now G.3-G.8).
  - d. Changed fonts and formatting throughout the permit for consistency.
8. Added condition B.17 – tune up requirement per Std. 5.2.
9. Added regulatory review to statement of basis since 2013 version did not include it.



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### July 15, 2013 Changes:

1. Formatting Changes - The template has been updated to mirror the new format used in all general Conditional Major Permits. All the general language has been updated to include the changes to the regulations since last renewal and to include the necessary language listed in all permits (except registration permits). A record of revisions table has been added in order to keep the general conditional major up to date. Previously these permits have not been updated to include new or changed requirements. As part of the new updated templates the emissions limitations table has been removed and replaced with conditions spelling out the emission limits and required monitoring and reporting.
2. The use of the General Permit Identification Numbers will be discontinued. This numbering system was set up as a way to sort information in the old databases previously used by BAQ ("STREAMS" and "AIRS"). EFIS is set up to track these permits by using permit subtypes. Each facility that is issued coverage under a general permit will have a prefix of GCM added prior to their permit number but the numbering system of 01 – textile greige, 02 – fuel combustion, 03 – hot mix asphalt, and 04 – concrete batch will no longer be used. The GCM will only be used on the actual permit to identify that the permit is a general conditional major. The same way that CM is used for conditional majors and TV for Title V.
3. Added a fugitive dust and non-enclosed operations condition which requires development and implementation of good work practices in the form of a Best Management Practices Plan. Conditions 3.F.10 and 3.F.11 of the previous permit specified requirements for fugitive emissions and daily visual inspections. These conditions were incorporated into new condition 4.A.2. This plan covers the sources that are not ducted to a facility's baghouse and can consist of conveyors, screens, other aggregate handling operations and windblown dust.
4. Added language to account for sources subject to 40CFR 60 Subpart IIII, 40CFR60 Subpart JJJJ, and 40CFR63 Subpart ZZZZ.
5. Added conditions for RAP equipment subject to 40CFR60 Subpart OOO. The RAP equipment at asphalt plants do not use wet suppression as a control device and so requirements for wet suppression were not included in the permit.
6. The individual permits: Once coverage is granted, Attachment A will contain the facility information including the physical location, the issue, effective, and expiration dates, the SIC and NAICS codes, and the equipment (including exempt and controls) located at the site. Attachment B is the modeled emission rates. No Statement of Basis will be routinely done for these sources because there are very few changes overtime. Should additional information need to be noted Statement of Basis will be done. Due to the simplicity of these facilities the need for this is very unlikely.
7. Added a condition for specification oil.
8. Conditions 3.F.9, 3.F.12 and 3.F.13 of the previous permit are specific baghouse monitoring and inspection requirements. All of the requirements contained in these conditions were combined into two new conditions.
9. Condition 3.F.1 of the previous permit specified a specific limit of 1,509,015 TPY for drum mix plants and



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493,515 TPY for batch mix plants. These limits were revised to 1,220,000 TPY for drum mix plants and 422,000 for batch mix plants. See determination below.

10. Grinding Mills will not be used and so the requirements for them from 40CFR60 Subpart OOO were not included.

11. Adjusted the asphalt production limit for Warm Mix Asphalt production.

### **DETERMINATION OF NEW ASPHALT PRODUCTION LIMITS**

The previous operating permit specified a production limit of 1,509,015 TPY for all drum mix plants and one specific limit of 493,515 TPY for all batch mix plants. Each asphalt plant applying for coverage under the renewal permit was required to submit updated emissions. Each asphalt plant's emissions for each pollutant were calculated using the appropriate AP-42 hot mix asphalt emission factor based on the type of plant. There are separate AP-42 emission factors for both drum mix and batch mix plants. The worst case emission factor was used from AP-42 in the calculation of worst case emissions.

- AP-42 states for both drum mix and batch mix plants that the type of fuel does not significantly affect PM emissions so there is only one uncontrolled PM emissions factor for each type of plant.
- There is only one AP-42 emission factor for CO emissions. AP-42 states that for both drum mix and batch mix the emissions data for dryers firing natural gas, No.2 fuel oil and No.6 fuel oil were combined to develop a single CO emission factor because the magnitude of emissions was similar for dryers fired with these fuels.
- AP-42 specifies different SO<sub>2</sub> and NO<sub>x</sub> emission factors for Natural Gas fired dryers, No.2 Fuel Oil fired dryers and Waste Oil Fired Dryers for each type of plant.
- There is only one AP-42 VOC emission factor for each type of plant.
- AP-42 specifies different uncontrolled HAP emission factors for Natural Gas fired dryers, No.2 Fuel Oil fired dryers and Waste Oil Fired Dryers for each type of plant.

Each individual asphalt plant has a combination of different maximum rated production capacities, different burner sizes, different hot oil heater sizes, different number of conveyors, different number of screens, and can use different fuel types. These differences lead to variations in emissions from one plant to the other and also to different asphalt production limits. A specific production limit for each asphalt plant that will keep emissions to below the emission limits of the permit was calculated based on the facility's setup. It was found that there are drum mix asphalt plants that could produce up to 1,520,000 TPY before exceeding the emission limits. The lowest production limit from among all the drum mix asphalt plants of 1,480,000 TPY and 422,000 for batch mix plants was used to ensure that no plant would violate the emission limits of the permit.

The following equipment was identified in the drum mix asphalt production process and the AP-42 emission factors include these sources:

- Asphalt Production with Baghouse (Fabric Filter)
- Conveying
- Screening
- RAP Screening and conveying
- Other Aggregate Handling (Ground Storage and Feed Bin)
- Wind blown dust



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- Hot Oil Heater
- Load Out and Asphalt Storage Silo
- Lime Silo
- Dryer

The following equipment was identified in the batch mix asphalt production process and the AP-42 emission factors include these sources:

- Asphalt Production with Baghouse (Fabric Filter)
- Conveying
- Screening
- Other Aggregate Handling (Ground Storage and Feed Bin)
- Wind blown dust
- Hot Oil Heater
- Load Out and Asphalt Storage Silo
- Lime Silo
- Dryer
- Hot Screens
- Mixer (Pug Mill)

During the permit renewal process, the asphalt plants requested to be able to produce warm mix asphalt. It was decided that this could be accomplished by adjusting the 1,480,000 TPY and 422,000 asphalt production limits. SCAPA provided emission factors based on performance tests conducted for asphalt plants producing warm mix asphalt. These emission factors were compared to the AP-42 hot mix asphalt emission factors. It was found that the warm mix emission factors for NO<sub>x</sub> and CO were higher than the corresponding AP-42 hot mix asphalt factor. Using these factors in place of the AP-42 hot mix asphalt emission factors gave a lowest production limit of 1,228,700 TPY for drum mix plants. The batch mix plant production limit did not need an adjustment as all of the AP-42 emission factors used for batch plants were higher than the warm mix emission factors provided by SCAPA. It was decided to round the 1,228,700 TPY limit to 1,220,000 TPY.

Tables 1 through 6 list the emissions from each source for a drum mix plant producing at 1,220,000 TPY

- The AP-42 asphalt production uncontrolled and fabric filter emission factors are based on source test data collected at the inlet and outlet of the fabric filter and measured filterable PM and condensable organic PM.

TABLE 1. DRUM MIX ASPHALT PRODUCTION EMISSIONS AT 1,220,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	11,200.0000	49,056.00	13.2000	20.13
PM <sub>10</sub>	2600.0000	11,388.00	9.2000	14.03
PM <sub>2.5</sub>	600.0000	2,628.00	1.1600	1.77
SO <sub>2</sub>	23.2000	101.62	23.2000	35.38
NO <sub>x</sub>	24.4000	106.87	24.4000	37.21
CO	64.0000	280.32	64.0000	97.60
VOC	12.8000	56.06	12.8000	19.52

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TABLE 1. DRUM MIX ASPHALT PRODUCTION EMISSIONS AT 1,220,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Lead	0.0060	2.63E-02	0.0060	9.15E-03
CO <sub>2</sub>	19,025	83,329	19,025	29,013
CH <sub>4</sub>	0.7606	3.3314	0.7606	1.1599
N <sub>2</sub> O	0.1521	0.6663	0.1521	0.2320

TABLE 2. DRUM MIX LOAD OUT AND ASPHALT STORAGE SILO EMISSIONS AT 1,220,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	0.4431	1.94	0.4431	0.68
VOC	6.4384	28.20	6.4384	9.82
CO	0.9834	4.31	0.9834	1.50

TABLE 3. DRUM MIX LIME SILO EMISSIONS AT 1,220,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	55.0000	38.54	0.5500	1.34E-01
PM <sub>10</sub>	55.0000	38.54	0.5500	1.34E-01
PM <sub>3.5</sub>	55.0000	38.54	0.5500	1.34E-01

- Plant has 3 virgin aggregate conveyors, 1 virgin aggregate screen, 2 RAP conveyors and 1 RAP screen
- Wind blown dust was estimated using 2 acres of aggregate piles
- For wind blow dust it was assumed that all PM<sub>10</sub> emissions would also be PM<sub>2.5</sub> emissions

TABLE 4. DRUM MIX FUGITIVE EMISSIONS AT 1,220,000 TPY						
Source	Pollutant Potential			Pollutant Limited		
	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
Total Conveyors	0.70	0.23	0.06	0.24	0.08	0.02
Total Screens	3.66	1.23	0.08	1.27	0.43	0.03
Other Aggregate Handling	3.78	1.79	0.27	1.32	0.62	0.09
Wind Blown	2.66	1.33	1.33	2.66	1.33	1.33
<b>TOTAL</b>	<b>10.80</b>	<b>4.58</b>	<b>1.74</b>	<b>5.49</b>	<b>2.46</b>	<b>1.47</b>

TABLE 5. DRUM MIX HOT OIL HEATER EMISSIONS AT 1,220,000 TPY				
Pollutant	Potential		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	0.0283	0.12	-	-



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PM <sub>10</sub>	0.0204	0.09	-	-
PM <sub>2.5</sub>	0.0183	0.08	-	-
SO <sub>2</sub>	0.6086	2.67	-	-
NO <sub>x</sub>	0.1714	0.75	-	-
CO	0.0429	0.19	-	-
VOC	0.0029	0.01	-	-
CO <sub>2</sub>	196	857	-	-
CH <sub>4</sub>	7.9366E-03	3.4762E-02	-	-
N <sub>2</sub> O	1.5873E-03	6.9525E-03	-	-

- Individual HAP emissions with potential emissions over 1.0 TPY are specified. All others are less than 1.0 TPY.

**TABLE 6. DRUM MIX HAP EMISSIONS AT 1,220,000 TPY**

Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Formaldehyde (HAP)	1.2764	5.5849	1.2764	1.9585
Hexane (HAP)	0.3754	1.6441	0.3754	0.5724
Toluene (HAP)	1.1665	5.1093	1.1665	1.7789
Naphthalene (HAP)	0.2636	1.1544	0.2636	0.4019
All Other HAP	1.2764	5.591	1.2764	1.9468
Total HAP	4.3570	19.0837	4.3570	6.6445

**TABLE 7. DRUM MIX TOTAL EMISSIONS AT 1,220,000 TPY**

Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	11,257.9369	49,107.41	16.6586	26.43
PM <sub>10</sub>	2,656.0656	11,431.21	10.8156	16.71
PM <sub>2.5</sub>	655.1139	2,667.04	1.8239	2.13
SO <sub>2</sub>	23.8086	104.28	23.8086	38.05
NO <sub>x</sub>	24.5714	107.62	24.5714	37.96
CO	65.0262	284.81	65.0262	99.29
VOC	19.2414	84.28	19.2414	29.35
Lead	0.0060	0.03	0.0060	0.01
CO <sub>2</sub>	19,221	84,186.46	19,221	30,078.68
CH <sub>4</sub>	0.7685	3.37	0.7685	1.20
N <sub>2</sub> O	0.1537	0.67	0.1537	0.24
CO <sub>2</sub> e Total	19,284	84,466	19,284	30,179
Total HAP	4.3570	19.0837	4.3570	6.6445

Tables 8 through 14 list the emissions from each source for a batch mix plant producing at 422,000 TPY

- The AP-42 uncontrolled and fabric filter emission factors used to calculate production emissions includes the

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dryer, hot screens and mixer (pug mill).

TABLE 8. BATCH MIX ASPHALT PRODUCTION EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	5600.0000	24528.00	7.3500	8.86
PM <sub>10</sub>	787.5000	3449.25	4.7250	5.70
PM <sub>2.5</sub>	47.2500	206.96	1.4525	1.75
SO <sub>2</sub>	15.4000	67.45	15.4000	18.57
NO <sub>x</sub>	21.0000	91.98	21.0000	25.32
CO	70.0000	306.60	70.0000	84.40
VOC	6.3000	27.59	6.3000	7.60
Lead	0.0026	1.15E-02	0.0026	3.17E-03
CO <sub>2</sub>	12,408	54,345	12,408	14,960
CH <sub>4</sub>	0.4960	2.1727	0.4960	0.5981
N <sub>2</sub> O	0.0992	0.4345	0.0992	0.1196

TABLE 9. BATCH MIX LOAD OUT AND ASPHALT STORAGE SILO EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	0.1939	0.85	0.1939	0.23
VOC	2.8168	12.34	2.8168	3.40
CO	0.4302	1.88	0.4302	0.52

TABLE 10. BATCH MIX LIME SILO EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	55.0000	16.86	0.5500	4.64E-02
PM <sub>10</sub>	55.0000	16.86	0.5500	4.64E-02
PM <sub>2.5</sub>	55.0000	16.86	0.5500	4.64E-02

- Plant has 3 total conveyors and 1 screen
- For wind blow dust it was assumed that all PM<sub>10</sub> emissions would also be PM<sub>2.5</sub> emissions

TABLE 11. BATCH MIX FUGITIVE EMISSIONS AT 422,000 TPY						
Source	Pollutant Potential			Pollutant Limited		
	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
Total Conveying	0.31	0.10	0.03	0.08	0.03	0.01
Screen	1.60	0.54	0.04	0.44	0.15	0.01
Other Aggregate Handling	1.65	0.78	0.12	0.46	0.22	0.03



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TABLE 11. BATCH MIX FUGITIVE EMISSIONS AT 422,000 TPY						
Source	Pollutant Potential			Pollutant Limited		
	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)	PM (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
Wind Blown	2.66	1.33	1.33	2.66	1.33	1.33
<b>TOTAL</b>	<b>6.22</b>	<b>2.75</b>	<b>1.52</b>	<b>3.64</b>	<b>1.73</b>	<b>1.38</b>

TABLE 12. BATCH MIX HOT OIL HEATER EMISSIONS AT 422,000 TPY				
Pollutant	Potential		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	0.0118	0.05	-	-
PM <sub>10</sub>	0.0085	0.04	-	-
PM <sub>2.5</sub>	0.0076	0.03	-	-
SO <sub>2</sub>	0.2536	1.11	-	-
NO <sub>x</sub>	0.0714	0.31	-	-
CO	0.0179	0.08	-	-
VOC	0.0012	0.01	-	-
CO <sub>2</sub>	82	357	-	-
CH <sub>4</sub>	3.3069E-03	1.4484E-02	-	-
N <sub>2</sub> O	6.6139E-04	2.8969E-03	-	-

- Individual HAP emissions with potential emissions over 1.0 TPY are specified. All others are less than 1.0 TPY.

TABLE 13. DRUM MIX HAP EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Xylene (HAP)	0.4797	2.1913	0.4797	0.57844
Ethyl Benzene (HAP)	0.3875	1.6988	0.3875	0.46763
All Other HAP	0.5349	2.3411	0.5349	0.6444
Total HAP	1.4021	6.1412	1.4021	1.6905

TABLE 14. BATCH MIX TOTAL EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	5,656.0190	24,549.33	8.9072	10.12

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TABLE 14. BATCH MIX TOTAL EMISSIONS AT 422,000 TPY				
Pollutant	Uncontrolled		Controlled/Limited	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM <sub>10</sub>	842.8331	3,467.57	5.6081	6.17
PM <sub>2.5</sub>	102.2995	224.03	2.0520	1.88
SO <sub>2</sub>	15.6536	68.56	15.6536	19.68
NO <sub>x</sub>	21.0714	92.29	21.0714	25.63
CO	70.4481	308.56	70.4481	85.00
VOC	9.1180	39.94	9.1180	11.00
Lead	0.0026	0.01	0.0026	0.00
CO <sub>2</sub>	12,489	54,702.38	12,489	15,317.46
CH <sub>4</sub>	0.4993	2.19	0.4993	0.61
N <sub>2</sub> O	0.0999	0.44	0.0999	0.12
CO <sub>2</sub> e Total	12,531	54,884	12,531	15,368
Xylene (HAP)	0.4797	2.1913	0.4797	0.57844
Ethyl Benzene (HAP)	0.3875	1.6988	0.3875	0.46763
All Other HAP	0.5349	2.3411	0.5349	0.6444
Total HAP	1.4021	6.1412	1.4021	1.6905

#### **CHANGES TO MONITORING TESTING AND LIMITS**

1. Production limits changed to 1,220,000 TPY for drum mix plants and 422,000 TPY for batch mix plants.
2. Uncontrolled PM<sub>2.5</sub> and PM<sub>10</sub> emissions from asphalt plants are greater than 100.0 TPY which triggers applicability to Title V. Uncontrolled PM, PM<sub>2.5</sub> and PM<sub>10</sub> from asphalt plants are also greater than 250.0 TPY which triggers applicability to SC Standard 7 (PSD) since each of those pollutants is a PSD pollutant. When a baghouse is used as a control device, emissions of each of these pollutants is controlled to less than 100.0 TPY which removes asphalt plants from applicability to these regulations. The owner/operator of the Main Baghouse of each asphalt plant will be required to develop a pressure drop range which demonstrates proper operation of the unit. When a baghouse is operating within the developed range, it is an indicator that the baghouse is working properly. The baghouse will also be required to be properly maintained and periodically inspected. If the baghouse is kept in proper operation then it will control emissions of these pollutants to



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below 100.0 TPY and compliance will be demonstrated with the 100.0 TPY limit of the new permit.

3. A facility-wide fugitive dust control plan (BMP Plan) is now required for controlling fugitive emissions from process operations, truck traffic and anywhere else fugitive dust emissions can be generated.
4. All Specification Oil used as fuel must meet the specifications for the parameters defined in SC Regulation 61-62.1 Section I Definition 93(a). A record of a lab analysis or supplier certification to show that each off-site shipment of oil and any on-site generated oil meet the specifications, records of the amount specification oil received from off-site and records of any on-site generated oil burned must be kept.
5. For the periodic test required to be conducted every two years for PM, the testing requirement was changed from conducting the test on a virgin aggregate mix, or up to 25% Reclaimed Asphalt Pavement (RAP) to conducting the test on a virgin aggregate mix or Reclaimed Asphalt Pavement (RAP) up to the maximum percent of aged binder allowable per SCDOT's RAP Specification.
6. Condition B.5 applies to all types of asphalt produced

### REGULATORY APPLICABILITY REVIEW

Regulation	Comments
<b>OPERATING PERMIT STATUS</b>	
SC Regulation 61-62.1, Section II(G) - Conditional Major	This permit has been established in accordance with the General Conditional Major provision of SC Regulation 61-62.1, Section II(G)(7) and has established limits for criteria pollutants to avoid major source thresholds for Title V, 112, and PSD.
<b>MODELING</b>	
SC Regulation 61-62.5, Standard No. 2 - Ambient Air Quality Standards	Modeling demonstrations are required on a case-by-case basis. A facility's emissions and the proximity and density of residences and population centers are the criteria for determination.
SC Regulation 61-62.5, Standard No. 7(c) - Ambient Air Increments	Modeling demonstrations are required on a case-by-case basis. A facility's emissions and the proximity and density of residences and population centers are the criteria for determination.
SC Regulation 61-62.5, Standard No. 8 - Toxic Air Pollutants (state only)	Modeling demonstrations are required on a case-by-case basis. A facility's emissions and the proximity and density of residences and population centers are the criteria for determination.
<b>OTHERS</b>	
SC Regulation 61-62.5, Standard No. 1 - Fuel Burning Operations	The fuel combustion sources associated with the GCMP would be subject to this regulation. This regulation establishes Opacity, PM, and SO <sub>2</sub> emission limitations based on size and installation date. See permit for details.

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Regulation	Comments								
SC Regulation 61-62.5, Standard No. 3 - Waste Combustion/Reduction (state only)	<p>Boilers with approval to burn used spec oil are subject to Section III(J)(6a and 6b) of this regulation. In order to demonstrate compliance with 6b, an analysis will have to be performed that meets the requirements of SC Regulation 62.1, Section I, Definition 91 - Used Oil. The used oil definition is as follow:</p> <table> <tr> <td>Arsenic - 5 ppm max</td><td>Nickel - 120 ppm max</td></tr> <tr> <td>Cadmium - 2 ppm max</td><td>Total halogens - 4,000 ppm max</td></tr> <tr> <td>Chromium - 10 ppm max</td><td>Flash point - 100 °F minimum</td></tr> <tr> <td>Lead - 100 ppm max</td><td></td></tr> </table> <p>This permit limits the total halogens to only 1,000 ppm maximum because Spec Oil above this limit is considered hazardous waste which is not allowed under this permit.</p> <p>The facilities burning used Spec Oil must maintain records of the amounts received for each shipment, the usage rates of the oil generated on site, and a waste analysis on the initial shipment. The source will have to perform additional analysis if the oil becomes inconsistent in composition or is received from another supplier.</p>	Arsenic - 5 ppm max	Nickel - 120 ppm max	Cadmium - 2 ppm max	Total halogens - 4,000 ppm max	Chromium - 10 ppm max	Flash point - 100 °F minimum	Lead - 100 ppm max	
Arsenic - 5 ppm max	Nickel - 120 ppm max								
Cadmium - 2 ppm max	Total halogens - 4,000 ppm max								
Chromium - 10 ppm max	Flash point - 100 °F minimum								
Lead - 100 ppm max									
SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries	All facility equipment (except boilers) will be subject to a 20% (installed after December 31, 1985) or 40% (installed on or before December 31, 1985) opacity limitation. This regulation establishes PM limits, and control requirements for asphalt plants. This regulation also requires an initial and periodic source testing every two years. See permit for details.								
Standard No. 5.2	<p>This standard applies to any stationary source that emits or has the potential to emit NO<sub>x</sub> generated from fuel combustion (a) constructed after June 25, 2004 or (b) any existing source where a burner assembly is replaced after June 25, 2004.</p> <p>Per S.C. Regulation 61-62.5, Standard No. 5.2, Section I(b)(16), portable sources such as asphalt plants or concrete batch plants are exempt from Section III of this standard. Asphalt plants are not considered as new source under this regulation and as such are not subject to Section VI (Tune-up requirements) until a burner assembly is replaced. An exemption from this requirement will be granted when a single burner assembly is being replaced in a source with multiple burners due to non-routine maintenance.</p>								
SC Regulation 61-62.5, Standard No. 7 - Prevention of Significant Deterioration	This permit establishes federally enforceable limits of less than 250.0 TPY for each criteria pollutant, limiting the facilities below PSD thresholds.								
SC Regulation 61-62.6, Control of Fugitive Particulate Matter	These facilities will be required to control fugitive PM emissions under this regulation.								
<b>Federal Regulations</b>									



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Regulation	Comments
40CFR60	<p>Asphalt facilities are subject to 40 CFR 60, Subpart A and Subpart I, Standards of Performance For Asphalt Concrete Plants, and S.C. Regulation 61-62.60 Subparts A and Subpart I. See permit for details.</p> <p>Some facilities are subject to 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (if they utilize RAP or crush/grind any of the nonmetallic minerals specified in this standard). RAP fractionating equipment (lumpbreakers and associated screen conveying system) are not subject to this regulation if:</p> <ul style="list-style-type: none"> <li>a) The lumpbreaker does not resize any aggregate or nonmetallic mineral embedded in the RAP, and</li> <li>b) Screen conveying system only delumps RAP, screens, and conveys past the point of the bin and directly into the drum for processing. Lumpbreaker returns RAP to its original state when it was first placed on a roadway.</li> </ul> <p>If the temporary crushing and screening equipment is owned and operated by another company or is leased and operated by the facility, the facility shall request a copy of the test documentation to demonstrate that the equipment has passed the necessary initial performance test. The facility shall keep a copy of this test documentation for your records. If the owner of the equipment cannot provide test performance documentation, the facility is responsible for performing the initial performance test and all other the temporary crushing and screening operation conditions.</p> <p>General cover language has been added for Subpart IIII and Subpart IIII.</p>
Area Source Standards (Part 63)	General cover language has been added for Subpart ZZZZ.

### **PUBLIC NOTICE**

This Conditional Major Permit will undergo a 30-day public notice period in accordance with SC Regulation 61-62.1, Section II.N. The comment period was open from June 22, 2018 to July 21, 2018 and was placed on the BAQ website during that time period. No comments were received during the comment period.

### **SUMMARY AND CONCLUSIONS**

If a facility can meet the requirements of this permit (including monitoring, recordkeeping and reporting) then it can be covered under this general conditional major permit and not cross the Title V major thresholds.